FEATURES

- 2 different configurable outputs: shutter channel (up to 1) and individual outputs (up to 2)
- Outputs suitable for capacitive loads, maximum 140 µF.
- 5 analog/digital inputs.
- Manual output operation with push button and LED Status indicator.
- 10 logic functions.
- Output timing.
- 4 thermostats.
- Total data saving on KNX bus failure.
- Integrated KNX BCU.
- Dimensions 67 x 90 x 35 mm (2 DIN units).
- DIN rail mounting (EN 50022), with fixing clamp.
- Possibility of connecting different phases in adjacent outputs.
- Conformity with the CE directives (CE-mark on the right side).

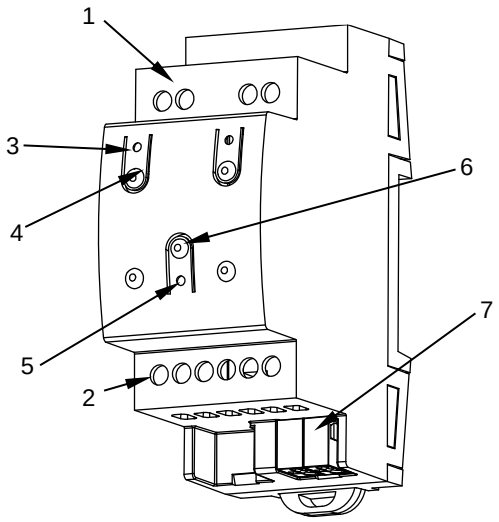


Figure 1: MINiBOX 25 v2

1. Analog/Digital inputs	2. Outputs	3. Output status LED indicator	4. Output control button
5. Programming/test LED	6. Programming/test button	7. KNX Connector	

Programming/Test button: short press to set programming mode. If this button is held while plugging the device into the KNX bus, it enters the safe mode. If this button is held for more than 3 seconds, the device enters the test mode.

Programming/Test LED: programming mode indicator (red). When the device enters the safe mode, it blinks (red) every half second. The manual mode is indicated by the green color. During the start-up (reset or after KNX bus failure) and if the device is not in safe mode, it starts a blue blinking sequence.

GENERAL SPECIFICATIONS

CONCEPT			DESCRIPTION	
Type of device			Electric operation control device	
KNX supply	Voltage (typical)		29VDC SELV	
	Voltage range		21..31VDC	
	Maximum consumption	Voltage	mA	mW
		29VDC (typical)	4.6	133.4
		24VDC[1]	10	240
	Connection type		Typical TP1 bus connector for 0.80mm Ø rigid cable	
External power supply			Not required	
Operation temperature			0°C .. +55°C	
Storage temperature			-20°C .. +55°C	
Operation humidity			5 .. 95% (No condens.)	
Storage humidity			5 .. 95% (No condens.)	
Complementary characteristics			Class B	
Protection class			II	
Operation type			Continuous operation	
Device action type			Type 1	
Electrical stress period			Long	
Degree of protection			IP20, clean environment	
Installation			Independent device to be mounted inside electrical panels with DIN rail (EN 50022)	
Minimum clearances			Not required	
Response on KNX bus failure			Data saving according to parameterization	
Response on KNX bus restart			Data recovery according to parameterization	
Operation indicator			The programming LED indicates programming mode (red) and test mode (green). Each output LED indicates its status	
Weight			78g	
PCB CTI index			175V	
Housing material			PC FR V0 halogen free	

[1] Maximum consumption in the worst case scenario (KNX Fan-In model)

OUTPUTS SPECIFICATIONS AND CONNECTIONS		
CONCEPT		**DESCRIPTION**
Number of outputs		2
Output type / Disconnection type		Potential-free outputs through bistable relays with tungsten pre-contact / Micro-disconnection
Rated current per output		AC 16(6)A @ 250VAC (4000VA) DC 7A @ 30VDC (210W)
Maximum load per output	Resistive	4000W
	Inductive	1500VA
Maximum inrush current		800A/200µs 165A/20ms
Connections in adjacent outputs		Possibility of connecting different phases. It is not allowed to connect power supplies of different order, SELV with NO SELV, in the same block
Total maximum current in device		20A
Short-circuit protection		NO
Overload protection		NO
Connection method		Screw terminal block
Cable cross-section		0.5-4mm² (IEC) / 20-12AWG (UL)
Outputs per common		1
Maximum response time		10ms
Mechanical lifetime (min. cycles)		3 000 000

INPUTS SPECIFICATIONS AND CONNECTIONS	
CONCEPT	**DESCRIPTION**
Number of inputs	5
Inputs per common	1
Operation voltage	+3.3VDC in the common
Operation current	1mA @ 3.3VDC (per input)
Switching type	Dry voltage contacts between input and common
Connection method	Screw terminal block
Cable cross-section	0.5-2.5mm² (IEC) / 26-12AWG (UL)
Maximum cable length	30m
NTC probe length	1.5m (up to 30m)
NTC accuracy (@ 25°C) [2]	±0.5°C
Temperature resolution	0.1°C
Maximum response time	10ms

[2] For Zennio temperature probes.

WIRING DIAGRAMS

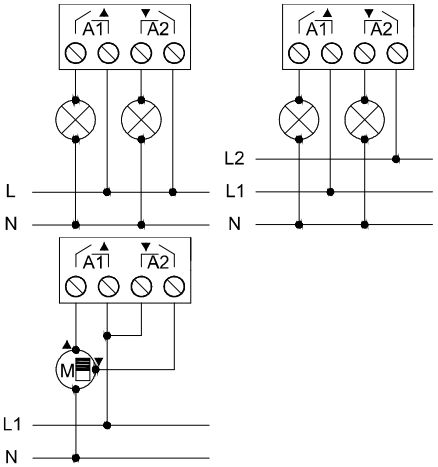
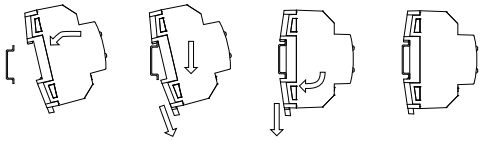


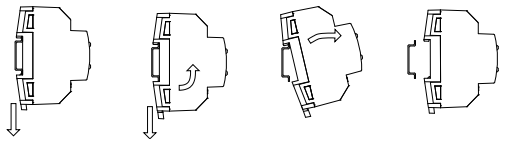
Figure 2: Wiring example (from left to right, and up to down): 2 loads, 2 loads connected to different phases and shutter

⚠ In order to ensure the expected status of the relays, please check that the device is connected to the KNX bus before energizing the power circuit.

Attaching MINiBOX 25 v2 to DIN rail:



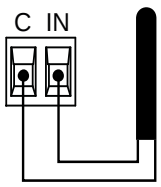
Removing MINiBOX 25 v2 from DIN rail:



INPUTS CONNECTION

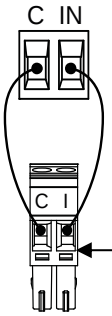
Any combination of the following **accessories** is allowed on the inputs:

Temperature Probe**



Zennio temperature probe.

Motion Sensor

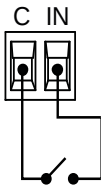


Up to two motion sensors can be plugged into the same device input (parallel wiring)

Motion sensor screw terminal.

Motion sensor references:
ZN1IO-DETEC-X
ZN1IO-DETEC-P*

Switch/Sensor/ Push button



* The micro switch number 2 in the ZN1IO-DETEC-P must be in **Type B position** to work properly.
** Zennio temperature probe or any NTC with known resistance values at three points in the range [-55, 150ºC].

SAFETY INSTRUCTIONS

- Installation should only be performed by qualified professionals according to the laws and regulations applicable in each country.
- Do not connect the mains voltage nor any other external voltage to any point of the KNX bus; it would represent a risk for the entire KNX system. The facility must have enough insulation between the mains (or auxiliary) voltage and the KNX bus or the wires of other accessories, in case of being installed.
- Once the device is installed (in the panel or box), it must not be accessible from outside.
- Keep the device away from water and do not cover it with clothes, paper or any other material while in use.
- The WEEE logo means that this device contains electronic parts and it must be properly disposed of by following the instructions at http://zennio.com/weee-regulation.